

Couples' voluntary HIV counseling and testing provider training evaluation, Zambia

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Summary

With the expansion of couples' voluntary HIV counseling and testing (CVCT) in urban Zambia, there is a growing need to evaluate CVCT provider trainings to ensure that couples are receiving quality counseling and care. We evaluated provider knowledge scores, pre- and post-training and predictors of pre- and post-training test scores. Providers operating in 67 government clinics in four Copperbelt Province cities were trained from 2008 to 2013 in three domains: counseling, rapid HIV laboratory testing and data management. Trainees received pre- and post-training tests on domain-specific topics. Pre- and post-training test scores were tabulated by provider demographics and training type, and paired *t*-tests evaluated differences in pre- and post-training test scores. Multivariable ANCOVA determined predictors of pre- and post-training test scores. We trained 1226 providers, and average test scores increased from 68.8% pre-training to 83.8% post-training ($p < 0.001$). Test scores increased significantly for every demographic group and training type ($p < 0.001$) with one exception—test scores did not significantly increase for those receiving counseling or data management training who had less than a high school education. In multivariable analysis, higher educational level and having a medical background were predictive of a higher pre-test score; higher pre-test scores and having a medical background were predictive of higher post-test scores. Pre- and post-test assessments are critical to ensure quality services, particularly as task-shifting from medical to lay staff becomes more common. Assessments showed that our CVCT trainings are successful at increasing knowledge, and that those with lower education may benefit from repeat trainings.

Key words: CVCT, HIV/AIDS prevention, task shifting, training evaluation, Zambia

INTRODUCTION

Two-thirds of individuals living with HIV reside in sub-Saharan Africa, with the highest incidence occurring in cohabiting heterosexual couples (UNAIDS, 2008).

Approximately 99% of incident HIV infections among married women and 84% among married men in urban Zambia occur within 'discordant,' stable relationships in which one partner is HIV-negative and the other is HIV-positive (DHS, 2003). This poses a significant

concern to Zambians, as roughly 60% of reproductive age adults (DHS, 2007) are in cohabiting unions, and among married couples more than 90% of reported sexual contacts are with the spouse (Allen *et al.*, 2003).

Couples' voluntary HIV counseling and testing (CVCT) is estimated to reduce HIV transmission in discordant couples by two-thirds (Dunkle *et al.*, 2008) and to reduce sexually transmitted infections, unplanned pregnancies and reported extramarital partners in all couples (Hira *et al.*, 1990; Kamenga *et al.*, 1991; Allen *et al.*, 1992, 2003; Fideli *et al.*, 2001; Guthrie *et al.*, 2007; Becker *et al.*, 2010; World Health Organization, 2012). Couples' testing also plays an important role in HIV prevention by educating couples as a unit and providing the necessary support during disclosure of each partner's HIV status (Kurth *et al.*, 2011). The Zambia-Emory HIV Research Project (ZEHRP) has provided CVCT training and counseling services in Lusaka, Zambia since 1994. In 2010, with funding from the Canadian International Development Agency (CIDA) through the Arise program overseen by the Program in Appropriate Technology in Health (PATH), ZEHRP expanded its CVCT training programs to more than 50 government clinics within the densely populated Copperbelt mining province. The goal of the expansion was to strengthen CVCT as a prevention strategy.

In 2007, the importance of CVCT was recognized with the development of *The Couples HIV Counseling and Testing Intervention and Training Curriculum*, a joint collaboration between the Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH), ZEHRP and the Liverpool School of Tropical Medicine (CDC, 2007). The CVCT training curriculum was fully endorsed by the Zambian Ministry of Health (MoH) in 2008.

However, implementation and expansion of CVCT within Zambia faces structural obstacles. CVCT entails specialized training that utilizes prevention and support messages in the context of the couple instead of the individual (Chomba *et al.*, 2008; Lehmann *et al.*, 2009). Unfortunately, many African countries, including Zambia, lack a sufficient number of health care providers to administer HIV-related care. One solution to this issue includes task-shifting HIV counseling roles to non-medical staff, commonly known as 'lay counselors' (Lehmann *et al.* 2009; Morris *et al.* 2009; Sanjana *et al.*, 2009; Walsh *et al.*, 2010; Msisuka *et al.*, 2011).

ZEHRP has worked with the Zambian MoH and local District Health Offices to conduct CVCT training sessions since 2008 within the Copperbelt Province (Sitrin *et al.*, 2009; Lambdin *et al.*, 2011). While assisting government clinics in Copperbelt cities establish

CVCT services, ZEHRP has also implemented a comprehensive training program including pre- and post-training didactic examinations.

Earlier evaluations demonstrate that didactic training programs can significantly improve health care providers' knowledge of HIV and improve the quality of care provided to HIV patients (Kamiru *et al.*, 2009; Lehmann *et al.*, 2009; Chao *et al.*, 2010). The purpose of this study is to evaluate the training programs provided by ZEHRP in four cities in the Copperbelt Province. Specifically, we sought to determine the effect of training on pre- and post-training test scores, and we also evaluated predictors of pre- and post-test scores. We were especially interested in the role of education and prior medical training on pre- and post-training test scores.

METHODS

Trainings

Trainings were conducted with providers from 67 government clinics in four cities (Ndola, Kitwe, Chingola and Luanshya) between 2008 and 2013. Trainings were provided by senior ZEHRP counselors who are fluent in both English and Bemba, the local dialect, and utilized interactive, lecture-based training with time allocated towards role-playing and hands-on demonstrations to accommodate different learning modalities. The CVCT counseling curriculum includes the following modules: (i) background and HIV discordance; (ii) introduction to couples' counseling skills; (iii) initial session of the CVCT intervention; (iv) providing concordant negative results; (v) providing concordant positive results; (vi) providing discordant results; (vii) support and prevention results and (viii) outreach and recruitment (CDC, 2007). The counselors are then provided with role-playing activities based on realistic clinic scenarios.

Additional training in data management and laboratory testing were offered to those who had successfully completed both didactic and practicum CVCT counseling training and had excelled in the first 2–3 months following counseling training. Modules for these trainings include good clinical laboratory practices, CVCT laboratory testing, and good data practice and quality control. The laboratory trainings include practicums with known and unknown samples and require previous certification in the rapid HIV testing algorithm training provided by the MoH. Similarly, the data trainings include recording of hypothetical couple results using the tools in use at CVCT services in government clinics with a focus on quality control and error checking.

Pre- and post-tests

For each training, the pre-test was given before the training, and the post-test was provided at the conclusion of the didactic training program (3 days for couples' counseling, and 1 day each for data management and rapid HIV laboratory testing). Pre- and post-tests were administered in English. Participants had 15 min to answer the test questions during both the pre- and post-test sessions. For the CVCT counselor training, the test was organized into 10 true/false questions and 1 open-ended question that tested the counselor's ability to explain a discordant result to the couple. The true/false section covered the main topics in the training modules, including the cause of HIV infection, modes of transmission, the basics of couples' counseling and the counseling of discordant results. The data management pre- and post-tests also consisted of 10 true/false questions and covered additional topics on monitoring and evaluation and quality control of the data collection process.

The laboratory training evaluation included 8 true/false questions measuring the ability to differentiate between individual voluntary counseling and testing (VCT) and CVCT testing algorithms (Manigart *et al.*, 2012), specific characteristics of each test kit, correct procedures for initial and follow-up testing and to identify the correct actions following the detection of an indeterminate or discrepant result. A multiple choice question on how to prevent testing errors was also included.

All pre- and post-tests were identical in order to ensure that no factors other than the intervention would have an impact on the test scores. The scores were calculated as a percentage of the correct answers, with each question weighted equally. Trainees achieving at least an 80% on the post-test proceed to practicums in the government clinics, and certification is given after competency is demonstrated during the practicum.

Analysis

The data were collected in Microsoft Access following each training workshop and were cleaned and analyzed retrospectively using SAS 9.0 (Cary, NC, USA) (SAS Institute, Inc., 1976). Participants were divided into three levels of education (i.e. less than high school, high school and college). Because 2008, 2009 and 2013 had a small number of participants, trainings by year were categorized to make the results of the analysis more meaningful. Job occupations were coded into a bivariate parameter that classified participants as either medical professionals or non-medical personnel. Medical professionals included nurses (equivalent to a licensed

practical nurse, registered nurse or Bachelor's level nurse in the US), midwives, clinical officers, clinical coordinators and laboratory technicians. The non-medical personnel included participants who were working as lay counselors, psychosocial counselors, social workers and community health workers.

Descriptive statistics were assessed, including age, gender, years of occupational experience, level of education and previous medical knowledge. Bivariate analyses using paired *t*-tests were used to evaluate the relationship between changes in pre- and post-test scores. Multivariable analysis of covariance (ANCOVA) was also used to assess the pre- and post-test, adjusting for the other parameters of interest. Variable multicollinearity was evaluated for all variables, and effect measure modification by training type was explored. The model was built by applying backward selection methods to a full model. A significance level of $p < 0.05$ was used for all analyses.

Ethical consideration

The training exercises were approved by the institutional review boards (IRBs) at both Emory University and the University of Zambia. In addition, Emory University IRB reviewed and waived the need for informed consent since data collected during the training exercises would only be used for quality assurance and reporting purposes. The trainings and data collection tools were also pre-approved by the Zambian MoH. All personal information was maintained as confidential.

RESULTS

Demographic descriptors for the trainees are presented in Table 1. Overall, 419 counselors, 430 laboratory technicians and 349 data managers were trained by ZEHHP from 2008 until 2013. Eighty percent of the trainees were women and almost half were aged 36–50 years old. Sixty-four percent of the participants had received a high school education, while another 34% had attended college. Seventy-percent had a medical background.

Paired *t*-test comparisons of pre- and post-training test results are shown for all trainees in Table 1. Both the overall average test score and the scores within each parameter of interest demonstrated statistically significant improvement following training ($p < 0.001$). The mean pre-training score for all training types was 68.8%, with a mean of 58.2% for counseling, 74.6% for laboratory testing and 76.6% for data management. Following the training intervention, the overall average

Table 1: Differences between pre- and post-test scores stratified by participant demographics

	Total	Pre-training test score		Post-training test score		Difference between pre- and post-test scores ^a
	%	Mean	SD	Mean	SD	
Overall		68.8	18.2	83.8	14.7	15.0
Training type						
Counseling	35	58.2	13.2	79.6	14.6	21.4
Laboratory testing	36	74.6	15.7	86.1	11.6	11.5
Data management	29	76.6	18.2	87.2	15.8	10.6
Sex						
Male	20	69.0	18.9	82.0	15.2	13.0
Female	80	68.8	18.0	84.3	14.5	15.5
Age						
35 or younger	24	69.7	18.8	85.2	14.0	15.5
36 to 50	48	70.2	18.1	84.7	14.4	14.5
Older than 50	27	65.7	17.2	80.9	15.3	15.2
Years of experience						
Less than 5 years	42	68.6	17.5	84.6	13.2	16.0
5–10 years	41	69.5	17.4	84.3	14.5	14.8
More than 10 years	17	73.1	18.3	84.2	14.8	11.1
Education						
Less than high school	2	38.3	14.7	63.0	17.8	24.7
High school	64	65.6	17.5	81.8	14.7	16.2
College or university	34	75.9	16.2	88.8	12.4	12.9
City						
Ndola	39	70.1	17.4	83.3	14.5	13.2
Kitwe	31	71.3	18.0	86.0	13.1	14.7
Chingola	20	65.4	18.2	81.7	16.5	16.3
Luanshya	10	69.4	16.0	86.4	12.3	17.0
Medical background						
Non-medical background	30	61.9	16.6	78.2	15.3	16.3
Medical professional	70	72.7	17.1	86.8	12.8	14.1
Training year						
2010 and earlier	11	63.8	16.9	79.0	14.6	15.2
2011	60	71.9	17.3	86.4	12.8	14.5
2012 and later	28	64.3	19.1	80.2	17.0	15.9

^aAll paired *t*-test *p*-values (2-tailed) for differences between pre- and post-training test scores are statistically significant ($p < 0.001$).

score in the post-test evaluation increased to 83.8%, a difference of 15 percentage points from the pre-training score. The averages within the 3 training types also improved to 79.6% for counseling, 86.1% for laboratory testing and 87.2% for data management, a difference of 21.4, 11.5 and 10.6 percentage points, respectively (Table 1). Ninety-eight percent of the data management and laboratory testing trainees passed their post-training test with at least an 80%. In contrast, counselors had an average post-training score just below the minimum requirement of 80%. Women and men had similar pre-training scores, but women showed more improvement than men following the intervention. Luanshya showed the greatest improvement by city with

an overall 17.0 point increase from 69.4% at baseline to 86.4% in the post-training test. Average post-training scores were less than the minimum requirement of 80% for the few trainees with less than a high school education, trainees with no medical background and those trained in 2010 or earlier.

Paired *t*-test comparisons of pre- and post-training test results stratified by training type are shown in Table 2. These results also found statistically significant increases in test scores in most demographic groups ($p < 0.0001$). Among the counseling and data management trainees, only the 9 with less than a high school education did not pass their post-training test, and data management trainees in 2012–13 scored an average of

Table 2: Differences between pre- and post-test scores stratified by participant demographics and by training type

	Counseling						Data Management						Laboratory Testing								
	Pre-training score			Post-training score			Pre-training score			Post-training score			Pre-training score			Post-training score					
	n	%	Mean	SD	n	%	Mean	SD	n	%	Mean	SD	n	%	Mean	SD	n	%	Mean	SD	
Overall	419		58.2	13.2	79.6	14.6	349	76.6	18.2	87.2	15.8	430		74.6	15.7	86.1	11.6				
Sex																					
Men	75	17.9	55.0	9.9	74.6	13.6	66	76.2	22.0	86.6	16.7	97	22.6	75.3	16.1	84.3	13.7				
Women	344	82.1	59.0	13.7	80.7	14.6	283	76.7	17.3	87.3	15.6	333	77.4	74.4	15.6	86.6	10.9				
Age																					
35 or younger	92	22.0	57.1	13.0	81.8	12.7	80	78.2	18.0	91.3	12.2	114	26.5	77.5	13.4	86.2	12.1				
36–50	196	46.8	60.0	14.0	81.8	14.7	172	77.1	19.1	86.3	17.1	217	50.5	74.7	16.2	86.3	11.2				
Older than 50	130	31.0	56.4	11.7	74.8	14.8	97	74.4	16.9	85.2	15.7	99	23.0	71.0	16.5	85.4	12.1				
Years of experience																					
Less than 5 years	197	47.0	57.4	13.8	80.1	13.5	115	76.5	16.5	89.4	12.7	160	37.2	76.6	14.5	86.8	11.3				
5–10 years	156	37.2	57.4	11.7	78.2	16.4	134	78.5	17.7	87.9	13.3	179	41.6	73.2	15.5	86.9	11.6				
More than 10 years	48	11.5	64.2	13.3	83.1	12.6	61	77.2	20.1	85.0	19.5	81	18.8	75.4	17.9	84.1	11.8				
Education																					
Less than high school	5	1.2	52.0	5.4	61.4	14.5	4	35.5	10.5	55.5	20.3	0	0	0	0	0	0				
High school	275	65.6	54.5	10.9	76.4	14.6	173	75.1	17.2	86.7	14.9	249	57.9	72.5	16.3	85.0	12.0				
College or university	107	25.5	67.0	14.7	88.7	10.3	131	80.5	16.4	89.4	15.4	137	31.9	78.5	14.4	88.2	10.7				
City																					
Ndola	137	32.7	56.6	11.5	75.8	14.5	165	78.4	17.5	86.4	15.3	166	38.6	72.9	14.7	86.5	11.2				
Kitwe	128	30.5	56.3	10.5	81.5	82	23.5	81.7	14.6	93.7	9.3	159	37.0	78.0	16.5	85.8	12.2				
Chingola	75	17.9	52.4	7.7	75.3	15.3	65	68.8	22.1	81.3	21.3	96	22.3	72.3	15.5	86.9	11.0				
Luanshya	76	18.1	70.5	16.9	87.7	11.6	29	69.3	14.6	86.9	13.0	9	2.1	60.3	8.6	74.4	10.0				
Medical background																					
Non-medical background	181	43.2	53.0	10.0	73.5	14.8	74	68.6	20.0	81.7	16.0	94	21.9	74.0	13.4	84.3	12.8				
Medical professional	229	54.7	62.1	13.6	84.5	12.5	258	79.2	16.7	89.2	14.5	334	77.7	74.8	16.3	86.6	11.3				
Training year																					
2010 and earlier	88	21.0	55.9	10.9	75.3	14.9	25	88.0	10.8	91.2	10.1	25	5.8	67.8	14.8	79.7	10.3				
2011	214	51.1	55.9	10.3	80.0	14.2	174	83.7	12.5	93.2	9.2	352	81.9	75.7	15.8	87.0	11.5				
2012 and later	117	27.9	64.3	17.1	82.2	14.5	150	66.5	19.8	79.5	19.1	53	12.3	70.4	14.4	83.2	12.2				

* *p*-values (2-tailed) from paired *t*-tests for differences between pre- and post-training test scores are statistically significant ($p < 0.05$) with the following exceptions: Difference between pre- and post-scores for those with less than a high school education who received the counseling training ($p = 0.31$) and data management training ($p = 0.08$). Ns may not add to total due to missing values.

Table 3: Multivariable ANCOVA analysis of predictors of pre- and post-test scores

	Pre-training tests			Post-training tests		
	β	t	p	β	t	p
Pre-training test score		n/a		38.9	5.2	<0.001
Education						
Less than high school	<i>Ref</i>			<i>Ref</i>		
High school	11.1	2.3	0.024	10.8	1.6	0.100
College or university	16.9	3.4	0.001	10.0	1.5	0.130
Sex						
Women	-0.1	-0.1	0.950	1.5	1.7	0.090
Men	<i>Ref</i>			<i>Ref</i>		
Training type						
Laboratory testing	14.6	7.3	<0.0001	11.7	2.9	0.005
Data management	28.7	13.3	<0.0001	-3.7	-0.9	0.350
Counseling	<i>Ref</i>			<i>Ref</i>		
Training year						
2010 and earlier	18.0	6.5	<0.0001	4.1	0.3	0.768
2011	20.2	8.7	<0.0001	-12.6	-1.4	0.171
2012 and later	<i>Ref</i>			<i>Ref</i>		
Medical background						
Non-medical background	<i>Ref</i>			<i>Ref</i>		
Medical professional	5.1	5.1	<0.0001	14.4	4.6	<0.001
City						
Ndola	<i>Ref</i>			<i>Ref</i>		
Kitwe	5.3	0.6	0.530	-1.6	0.2	0.816
Chingola	13.3	3.9	<0.0001	-10.6	-2.7	0.007
Luanshya	29.9	3.2	<0.0001	1.5	0.4	0.725

79.5%. Among laboratory trainees, all groups had passing average post-training scores with the exception of 9 trainees from Luanshya. Trainees with a medical background had substantially higher pre- and post-training scores than non-medical personnel in the data management trainings, but differences were minimal in the laboratory trainings.

In contrast, counseling training was less successful overall, with many groups having post-training scores below 80% (Table 2). Women counselors had higher scores than men for both the pre- and post-tests (women: pre = 59.0%, post = 80.7%; men: pre = 55.0%, post = 74.6%). Counselor trainees over the age of 50, those with 5–10 years of experience, those with less than a college education or a non-medical background, those from Ndola or Chingola, and those trained in 2010 or earlier had average post-training scores below the minimum 80%. In addition, counselor trainees with a medical background had substantially higher pre- and post-training scores than non-medical personnel.

An evaluation of the average test scores in the 4 cities and by training year found no consistent patterns.

Overall, counselors in 2 of the 4 cities had average post-training scores greater than 80%, whereas data management and laboratory testing trainees had a score higher than 80% in all cities with the exception of Luanshya for laboratory testing (74.4%). Luanshya also had the lowest average laboratory testing pre-test score (60.3%), but had the highest counseling pre- and post-test scores of the 4 cities. Chingola had the lowest pre- and post-test scores for both counseling (52.4 and 75.3%, respectively) and data management (68.8 and 81.3%, respectively) trainings.

Multivariable analyses of predictors of pre- and post-test scores, shown in Table 3, also showed that having a medical background, receiving training in data management or laboratory testing and receiving training during 2011 remained predictive of higher test scores both pre- and post-training. Pre-test scores for high school ($\beta = 11.1$, $p = 0.024$) and college ($\beta = 16.9$, $p = 0.001$) educated participants were significantly higher compared to those who received less than a high school education. However, although there was a positive correlation between education level and post-test score

averages, the difference was not statistically significant in the multivariable model (*ref*=less than high school, high school $p=0.100$, college $p=0.130$). Having a medical background versus non-medical background was predictive of higher average pre-training test score ($\beta=5.1$, $p<0.0001$) and post-training test score ($\beta=14.4$, $p<0.0001$). Age and years of experience were collinear, and both parameters were not predictive in either the pre- or post-test ANCOVA analyses. No effect measure modification was observed by training type.

DISCUSSION

As demonstrated in the pre-post analyses, standardized didactic materials offer a highly effective training method to prepare counselors for all aspects of CVCT. Though pre-test scores were significantly impacted by factors such as level of education and medical background, significant improvement in test score averages was noted in all educational groups. Additionally, while educational level was predictive of pre-training test scores, this covariate did not remain a significant predictor during post-test analysis.

Although overall knowledge scores pre-training were below an acceptable passing score, average post-training test scores were above the minimum passing grade of 80% for data management and laboratory training, and 79% for counseling. The main contributor to standard post-test counseling scores were trainees with no medical background and lower educational attainment, who often required booster counseling training to achieve a passing score.

With the shortage of human medical resources in Zambia, CVCT has been delegated to lay counselors. Our results confirm that while the quality of CVCT can be maintained, it is essential to quantitatively assess the success of training and to provide booster trainings as needed. Maintaining the high quality of such training is paramount—a recent qualitative analysis of task-shifting and quality of HIV services conducted in Lusaka, Zambia showed that inadequate training and non-adherence to testing procedures were key challenges in successful task-shifting (Mwangala *et al.*, 2015). Booster or refresher trainings are also an important part of successful task-shifting as has been demonstrated in another recent study in Zambia which indicated that lay counselors were at risk of protocol non-adherence without refresher trainings (Msisuka *et al.*, 2011).

The consistently higher scores seen with medical professionals suggests that limiting the roles of trainers, or trainers of trainers, to medical staff may result in high quality services, as suggested by the CDC/Partner Program's results of task-shifting and the Training the Trainers Model implemented in Zambia (Jones *et al.*, 2015). Further, though we did not explicitly evaluate the role of supervision, adequate ongoing supervisory support for lay counselors has been cited repeatedly as a key component of successful task-shifting and warrants consideration by implementers (Ledikwe *et al.*, 2013; Crowley and Mayers, 2015) and has been a mainstay of the successful CVCT implementation model.

The study was based over a 6-year period and the large training cohort allowed for stratification during analysis, while still maintaining good precision and adequate sample sizes within most subgroups. Using the same test questions on both the pre- and post-test also allowed for a more accurate evaluation of the training intervention by ensuring that a participant's CVCT knowledge could not be influenced by factors including question or wording changes. The largest number of trainings of all types was conducted in 2011 when the efficiency of the training program was at its height: this may explain why the trainee scores were higher that year compared with earlier years when the training programs were first launching, and after 2011 when trainers resumed other tasks in addition to training.

There were several limitations due to both the design of the study and the inherent construction of the evaluation tool. Since the pre- and post-test questionnaires were based on true/false questions that were provided within 3 days of one another, this posed a threat to internal validity. Specifically, the short duration of time between the pre- and post-tests could lead to higher test scores in the post-test because of familiarity with the questions. The use of the ZEHDP database prevented any evaluation of specific topics or questions within the pre- and post-test questionnaires, because only the percentage of correct answers was entered into the database. There was also no data available on the number of HIV-related trainings each of the participants may have previously attended. English was the language of instruction and the language used in pre- and post-tests and in tools such as flip charts and data logs which likely contributed to poorer performance among those with limited English. Lastly, though knowledge is a prerequisite for successful performance, knowledge alone does not guarantee good counseling.

CONCLUSION

The study found that the ZEHRP training curriculum was highly effective in improving participants' knowledge of CVCT and related counseling, testing and data recording procedures. Among those taking lab and data trainings, all trainees had passing scores regardless of prior medical training. The findings confirm that the training curriculum can help close the knowledge gap between medical professionals and non-medical personnel. This supports the MoH's decision to task-shift certain counseling roles to the lay counselors in order to address the shortage in the number of health care providers. However, among those participating in counselor trainings, the average score was below passing. This indicates an area for future improvement. Nevertheless, systematic pre- and post-test assessments are critical to ensure quality services and to highlight training components that must be repeated until passing scores are achieved.

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CONFLICT OF INTEREST

None declared.

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